

DR. SHASHIKANT KAMBLE

Scientist

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Nationality	: Indian
Languages Known	: English, Hindi, Marathi, Konkani and Gujarati
URL	: http://in.linkedin.com/in/shashikantkamble
SKYPE ID	: skorganics (Profile Name: Dr. Shashikant Kamble)
Area of Specialization	: Chemical Engineering / Environmental Engineering

Educational Qualifications

🌟 Doctor of Philosophy in Chemical Engineering {Ph.D. (Tech.)}

Institute : Institute of Chemical Technology (ICT, formerly UDCT/UICT), Matunga, Mumbai
Thesis Title : Development of Commercially Relevant Green Processes using Alkylation
Academic Year : March 2008, Mumbai University

🌟 Master of Chemical Engineering {M.Chem.Engg.}

Institute : Institute of Chemical Technology (ICT, formerly UDCT/UICT), Matunga, Mumbai
Thesis Title : Membrane Processes for Metal Recovery
Academic Year : September 2004, Mumbai University

🌟 Bachelor of Chemical Engineering {B.E. (Chemical)}

Institute : Bharati Vidyapeeth's College of Engineering (BVCOE), Navi Mumbai
Project Title : Manufacture of Purified Terephthalic Acid (PTA)
Academic Year : November 1999, Mumbai University
Elective Subjects : Piping Engineering, Plant Safety, Heterogeneous Catalysis

Environmental / Field Experience (30th August 2014 - Till Date)

Especially dealing with Environmental Impact Assessment, Pollution Impact Assessment, Hazardous Waste Audit, Hazardous Waste Management, Solid Waste Audit, Solid Waste Management, making technical reports for PIL Court Cases of Hon'ble National Green Tribunal (NGT) and High Court. The work also includes Process and Technology Development.

Scientific / Technical Experience (1st July 2010 - 29th August 2014)

Worked as a **Scientist** in the Department of Process Design and Engineering Cell (PDEC) at **CSIR-Central Salt & Marine Chemicals Research Institute (CSIR-CSMCRI)**, Gijubhai Badheka Marg, Bhavnagar-364002, Gujarat, INDIA. CSIR-CSMCRI is a premier scientific research institute/national laboratory under the Council of Scientific & Industrial Research (CSIR), New Delhi, which is an autonomous body under the Department of Scientific & Industrial Research (DSIR), Ministry of Science & Technology, Government of India (GOI).

Purpose of this research work was to develop & improve the process technology from laboratory/bench scale to pilot plant scale including engineering, procurement & construction (EPC) projects. In general, the work includes the heterogeneous solid catalyst development & scale-up, process & technology

development, mass transfer study including intraparticle diffusion & reaction kinetics, process design & construction and interpretation of data to validate experimental results.

Industrial Experience (1st October 2009 – 30th June 2010)

Worked as a **Consultant/R&D Incharge** in **Ganesh Lube Oils** at Plot Number B-49, M.I.D.C. Karad, Satara-415110, Maharashtra, INDIA. The company is a manufacturer of engine oil and gear oil. The purpose of this work was to give technical support to the company for improving impeller & baffle design to enhance the horizontal (radial) as well as vertical (axial) flow pattern of reaction mixture (liquid-liquid homogeneous reaction system) for well agitation in blending/mixing reactor unit, which helps to enhance the quality of products, energy reduction and process development.

Academic Research Experience (1st April 2008 – 30th September 2009)

Worked as a **Post Doctoral Fellow (PDF)** on a project “Preliminary Process Analysis for Copper-Chlorine (Cu-Cl) Thermochemical Hydrogen Production Process” sponsored by **Oil and Natural Gas Corporation Limited (ONGC)** in Institute of Chemical Technology (ICT, formerly UDCT/UICT), Matunga, Mumbai-400019, Maharashtra, INDIA.

Number of Students Guided

- ✓ B.Tech. Students – 04
- ✓ M.Tech. Students – 03

Ph.D. Guideship Registration

- ✓ Academy of Scientific and Innovative Research (AcSIR): Assistant Professor in the Faculty of **Engineering Science** (Letter Number: F.No.:AcSIR/5/2(1)-2014 dated 11-03-2014)
- ✓ Mumbai University: Ph.D. Guideship in **Chemical Engineering** (Letter Number: PG/2/ICD/2017-18/1095 dated 21-09-2017)

Qualified Courses

1. Qualified and achieve 80% marks in “DL-101 General Course on Intellectual Property” A distance learning program (1st October 2010 to 15th November 2010) organized by World Intellectual Property Organization (WIPO) Worldwide Academy, 34, chemin des Colombettes, CH-1211 Geneva 20, Switzerland.
Course outline: The “DL-101 General Course on Intellectual Property” covers the main areas of intellectual property, namely copyright, related rights, patents, trademarks, geographical indications, industrial design, plant breeders’ rights, unfair competition and international registration systems.

Research Publications

Papers Published (h-index = 06, i10-index = 05, Total Citations = 103)

1. G. D. Yadav and **S. B. Kamble**, “Friedel–Crafts green alkylation of xylenes with *tert*-butanol over mesoporous superacid UDCaT-5”, *Chemical Engineering Research and Design*, 90, 2012, 1322–1334. [DOI: 10.1016/j.cherd.2011.12.005] [Impact Factor = 3.073 (2018), Number of Citations = 12]
2. G. D. Yadav and **S. B. Kamble**, “Atom efficient Friedel–Crafts acylation of toluene with propionic anhydride over solid mesoporous superacid UDCaT-5”, *Applied Catalysis A: General*, 433–434, 2012, 265–274. [DOI: 10.1016/j.apcata.2012.05.031] [Impact Factor = 4.630 (2018), Number of Citations = 09]
3. G. D. Yadav and **S. B. Kamble**, “Alkylation of xylenes with isopropyl alcohol over acidic clay supported catalysts: Efficacy of 20% w/w Cs_{2.5}H_{0.5}PW₁₂O₄₀/K-10 clay”, *Industrial and Engineering*

Chemistry Research, 48, 2009, 9383–9393. [DOI: 10.1021/ie800737v] [Impact Factor = 3.375 (2018), Number of Citations = 17]

Citations: J. H. Clark, D. J. Macquarrie, M. Debruyne, “Catalysts, Supported” Kirk-Othmer Encyclopedia of Chemical Technology, 2011, 1–37. Reference Number: 41, Article DOI: 10.1002/0471238961.1921161614090512.a01.pub3

4. G. D. Yadav and **S. B. Kamble**, “Synthesis of carvacrol by Friedel-Crafts alkylation of *o*-cresol with isopropanol using superacidic catalyst UDCaT-5”, *Journal of Chemical Technology and Biotechnology*, 84, 2009, 1499–1508. [DOI: 10.1002/jctb.2210] [Impact Factor = 2.659 (2018), Number of Citations = 21]
5. G. D. Yadav and **S. B. Kamble**, “Selectivity engineering in isopropylation of mesitylene with isopropyl alcohol over cesium substituted heteropolyacid supported on K-10 clay”, *Clean Technologies and Environmental Policy*, 11, 2009, 447–457. [DOI: 10.1007/s10098-009-0203-x] [Impact Factor = 2.277 (2018), Number of Citations = 02]
6. G. D. Yadav and **S. B. Kamble**, “Friedel-Crafts alkylation of mesitylene with *tert*-butyl alcohol over novel solid acid catalyst UDCaT-5”, *International Journal of Chemical Reactor Engineering*, 7, 2009, A12. [DOI: 10.2202/1542-6580.1843] [Impact Factor = 1.059 (2018), Number of Citations = 04] Available at: <http://www.degruyter.com/view/j/ijcre.2009.7.1/ijcre.2009.7.1.1843/ijcre.2009.7.1.1843.xml>
7. **S. B. Kamble** and K. V. Marathe, “Membrane characteristics and fouling study in MEUF for the removal of chromate anions from aqueous streams”, *Separation Science and Technology*, 40, 2005, 3051–3070. [DOI: 10.1080/01496390500385061] [Impact Factor = 1.354 (2018), Number of Citations = 24]
8. **S. B. Kamble** and K. V. Marathe, “Micellar-enhanced ultrafiltration of chromate [Cr(VI)] ion from aqueous streams by using cationic surfactant”, *Indian Journal of Chemical Technology*, 12, 2005, 393–400. [IPC Code: B01D61/14; C02F] [Impact Factor = 0.614 (2018), Number of Citations = 14]

Conference Proceedings and Oral Presentations

1. Apurva Barve, Krutika Dalvi, **Shashikant Kamble***, Ritesh Vijay and Rakesh Kumar, “Assessment of Odorous Compounds at a Landfill Site: A Case Study of Kanjurmarg Dumping Ground, Mumbai” Poster Presented at International Conference on Innovations in Municipal Solid Waste Management and Best Practices for Circular Economy and Sustainable Environment; at Waste to Energy EXPO & Conference at Hall 3, Bangalore International Exhibition Centre (BIEC), Bangalore, India organized by Clean India Technology in association with Waste to Energy Research and Technology Council (WTER) India (13th to 14th February 2019).
2. Meetkumar N. Govani, **Shashikant B. Kamble***, Anurag Kandya and Hemixa Patel, “High Rate methane generation from municipal solid waste using FeP and CuP” Presented at International Conference on Environment and Natural Science (ICENS) Bali, Indonesia organized by IASTEM and in association with PET (Paper ID: IA-ICENSBLI-13068-8226) (URL: www.iastem.org and <http://iastem.org/Conference2018/Indonesia/2/ICENS/>) (13th to 14th June 2018).
3. Abhishek Kumar and **Dr. Shashikant Kamble***, “Integrated Assessment Modelling of Air Pollution in Mumbai – An application of DPSIR framework” Presented at 9th International Conference for Environmental Science and Development (ICESD 2018), Paris, France organized by Hong Kong Chemical, Biological & Environmental Engineering Society (HKCBEE) at NOVOTEL PARIS CRETEIL LE LAC, Paris, France (URL: www.cbees.org and www.icesd.org) (7th to 9th February 2018).
4. Akshay C. Chauhan, **Dr. Shashikant B. Kamble*** and Dr. Anurag Kandya, “Study of Bioreactor Landfill Cell Design Using Base Model” Presented at 7th International Conference on Agricultural, Chemical, Biological and Environmental Sciences (ACBES 2017, IICBE 2017) (Paper ID: C0517018, PP 77–80, ISBN 978-93-84422-78-3) organized by the International Institute of Chemical, Biological & Environmental Engineering (IICBEE) at Grand Seasons Hotel, Kuala Lumpur, No. 72 Jalan Pahang, 53000 Kuala Lumpur, Federal Territory of Kuala Lumpur, Malaysia (URL: www.iicbe.org) (22nd to 24th May 2017).

5. **S. B. Kamble**, “Green scale-up of Jasminaldehyde” Presented at Young Scientists' Research Forum (YSRF 2010), organized by CSIR-Central Salt & Marine Chemicals Research Institute (CSIR-CSMCRI) seminar committee, Gijubhai Badheka Marg, Bhavnagar-364002, Gujarat, India (6th October 2010).
6. **S. B. Kamble** and G. D. Yadav, “Atom economical synthesis of 4'-methylpropiophenone by Friedel-Crafts acylation of toluene with propionic anhydride over solid mesoporous superacid UDCaT-5” Presented at 62nd Annual Session Conference of Indian Institute of Chemical Engineers (IChE) and Indian Chemical Engineering Congress (CHEMCON 2009) organized jointly by the Waltair Regional Centre of the IChE and the Department of Chemical Engineering, Andhra University, Visakhapatnam-530003, India (27th to 30th December 2009).
7. **S. B. Kamble** and G. D. Yadav, “Synthesis of carvacrol by Friedel-Crafts alkylation of *o*-cresol with isopropanol using superacidic catalyst UDCaT-5” Presented at 62nd Annual Session Conference of Indian Institute of Chemical Engineers (IChE) and Indian Chemical Engineering Congress (CHEMCON 2009) organized jointly by the Waltair Regional Centre of the IChE and the Department of Chemical Engineering, Andhra University, Visakhapatnam-530003, India (27th to 30th December 2009).
8. **S. B. Kamble** and G. D. Yadav, “Selectivity engineering in isopropylation of mesitylene with isopropyl alcohol over cesium substituted heteropolyacid supported on K-10 clay” Presented at 62nd Annual Session Conference of Indian Institute of Chemical Engineers (IChE) and Indian Chemical Engineering Congress (CHEMCON 2009) organized jointly by the Waltair Regional Centre of the IChE and the Department of Chemical Engineering, Andhra University, Visakhapatnam-530003, India (27th to 30th December 2009).
9. **S. B. Kamble** and G. D. Yadav, “Friedel-Crafts alkylation of xylenes with *tert*-butanol over mesoporous superacid UDCaT-5” Presented at 62nd Annual Session Conference of Indian Institute of Chemical Engineers (IChE) and Indian Chemical Engineering Congress (CHEMCON 2009) organized jointly by the Waltair Regional Centre of the IChE and the Department of Chemical Engineering, Andhra University, Visakhapatnam-530003, India (27th to 30th December 2009).
10. **S. B. Kamble** and K. V. Marathe, “Membrane characteristics and fouling study in MEUF for the removal of chromate anions from aqueous streams” Presented at 62nd Annual Session Conference of Indian Institute of Chemical Engineers (IChE) and Indian Chemical Engineering Congress (CHEMCON 2009) organized jointly by the Waltair Regional Centre of the IChE and the Department of Chemical Engineering, Andhra University, Visakhapatnam-530003, India (27th to 30th December 2009).
11. **S. B. Kamble** and G. D. Yadav, “Friedel-Crafts alkylation of mesitylene with *tert*-butyl alcohol over novel solid acid catalyst UDCaT-5” Presented at Young Researchers' Conference 2009 (YRC 2009), under the auspices of World Bank assisted Technical Education Quality Improvement Program (TEQIP) organized by the Department of Chemical Engineering, Institute of Chemical Technology (ICT, formerly UDCT/UICT), Mumbai-400019, India (27th to 28th January 2009).
12. **S. B. Kamble** and G. D. Yadav, “Alkylation of xylenes with isopropyl alcohol over 20% w/w Cs-DTP/K-10 clay catalyst” Presented at 61st Annual Session Conference of Indian Institute of Chemical Engineers (IChE) and Indian Chemical Engineering Congress (CHEMCON 2008) organized jointly by the Chandigarh Regional Centre of the IChE and the Department of Chemical Engineering & Technology, Panjab University, Chandigarh-160014, India (27th to 30th December 2008).
13. A. B. Nirukhe, P. S. Parhad, **S. B. Kamble** and G. D. Yadav, “Study of hydrogen generation using copper and hydrochloric acid” Presented at 61st Annual Session Conference of Indian Institute of Chemical Engineers (IChE) and Indian Chemical Engineering Congress (CHEMCON 2008) organized jointly by the Chandigarh Regional Centre of the IChE and the Department of Chemical Engineering & Technology, Panjab University, Chandigarh-160014, India (27th to 30th December 2008).

Invited Talk/Expert Lecture/Seminar Delivered

1. “Green Chemistry” Invited talk delivered at CSIR-Indian Institute of Chemical Technology (CSIR-IICT), Tarnaka, Uppal Road, Hyderabad-500007, Andhra Pradesh, India (18th February 2010).
2. “Molecular Thermodynamics of Sorption Process” Seminar delivered under the guidance of Professor V. G. Gaikar, Head, Department of Chemical Engineering, Institute of Chemical Technology (ICT, formerly UDCT/UICT), Mumbai-400019, India as a part of M.Chem.Engg. Degree (April 2002).

Experimental Skill

Expertise in handling laboratory high pressure Parr autoclave reactors.

Well acquainted with the operation and handling of various sophisticated analytical instruments such as UV-Visible attachment of Jasco Spectrofluorometer (Model, FP-6200), UV-Spectrophotometer, Gas Chromatograph (Chemito Model, GC-8610).

Research and Teaching Interests

Green Chemistry

Membrane Processes

Environmental Engineering

Environmental Impact Assessment

Process & Technology Development

Chemical Reaction Engineering & Catalysis

Technology Transfer and Project Management

Engineering, Procurement & Construction (EPC)

Process Design & Scale-Up from Laboratory/Bench Scale to Pilot Plant Scale

Scholarships/ Fellowships/Awards

1. Second Runner-Up in Thomson Reuters Web of Knowledge Discovery Quiz 2012 and Winner of Canon PowerShot A2300 Digital Camera (23rd July to 6th August 2012).
2. Recipient of Senior Research Fellowship (SRF) from University Grants Commission (UGC), Government of India for Ph.D. (Tech.) in Chemical Engineering degree (2004-2008).
3. Recipient of Junior Research Fellowship (JRF) from University Grants Commission (UGC), Government of India for Master of Chemical Engineering (M.Chem.Engg.) degree (2001-2003).
4. Qualified Graduate Aptitude Test in Engineering (GATE) in 2001 conducted by IIT, Kanpur in Chemical Engineering branch.

I, undersigned hereby declare that the information given above is true to the best of my knowledge.

Place: Mumbai

(Dr. Shashikant Kamble)